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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/820,280
Filing Date: April 08, 2004
Appellant(s): ADOLINE ET AL.

Attorney Brian E. Turung
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 1, 2009 appealing from the Office action mailed October 2, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,615,450	Salice	9-2003
US 5,360,123	Johnston	11-1994

US 5,728,174	Fitzlaff	3-1998
US 5,551,674	Johnsen	9-1996
US 4,148,469	Geyer	4-1979
US 6,315,093	Miura et al.	11-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5, 10, 11, 13, 27, 29, 31, 49, 50, 57, 60, and 74-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice (US 6,615,450) in view of Johnston (US 5,360,123) and in view of Fitzlaff (US 5,728,174).

Salice disclosed, as shown in fig. 1-4, a spring system comprising a housing 1 having an axis, an internal chamber, and axially opposite bottom and top ends; a rod member 9 having an inner end in said housing and an outer end axially outwardly of said top end of said housing; a guide member (piston) 7 on said inner end of said rod member; a compression spring 6 extending between said guide member and the bottom end of said housing; and top and bottom bushings, said top bushing positioned at least closely adjacent to said top end of said housing and a bottom bushing positioned at least closely adjacent to said bottom end of said housing; said top bushing including an opening to enable a portion of said rod member to pass therethrough and to support said rod member for reciprocation axially of said housing between retracted and extended positions relative thereto, said top bushing including a sealing arrangement 28 to inhibit fluid from entering into and escaping from said internal chamber; said spring applying a force on said guide member as said rod member moves between fully retracted and fully extend positions, said guide member designed to move into engagement with or move to a position closely adjacent (relatively broad phrase) to said top bushing when said rod member moves to a fully extended position, said spring having a free length that is at least a majority length of said internal chamber, said spring contacting said bottom bushing when said rod member in said fully retracted position, said guide member dividing said internal chamber into at least two sub-

chambers, said guide member including a first passageway 19, 20 (see fig. 3 and 4) that regulates fluid flow between said at least two sub-chambers during reciprocation of said rod member, said first passageway spaced from an outer edge of said guide member, said outer end of said rod member including a mounting element.

However Salice failed to disclose a second compression spring extending between said guide member and the bottom end of said housing and a sealing arrangement positioned at least closely adjacent to a bottom of said top bushing.

Johnston teaches, as shown in fig. 18, the use of first 134 and second 136 compression springs extending between the guide member and the bottom end of the housing.

It would have been obvious to one of ordinary skill in the art to provide a second compression spring into the spring system of Salice, as taught by Johnston, in order to increase the linear spring force.

Fitzlaff teaches, as shown in fig. 1, a sealing arrangement 4 positioned at least closely adjacent to a bottom of a top bushing 2.

It would have been obvious to one of ordinary skill in the art to provide a seal positioned at least closely adjacent to the bottom of the top bushing of Salice, as taught by Fitzlaff, in order to provide a tight seal between the top bushing and the cylinder so as to avoid leakage in the inner chamber.

6. Claims 2, 6, 8, 12, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston and in view of Fitzlaff as applied to claims 1 and 49 above, and further in view of Johnsen (US 5,551,674).

Salice as modified disclosed wherein the outside diameter of the first compression spring is less than the outside diameter of the second compression spring and the wire diameter of the first spring is less than the wire diameter of the second spring but failed to disclose wherein the direction of winding of said first compression spring is opposite to the direction of winding of said second compression spring.

Johnsen teaches, as shown in fig. 1, a resilient support device 10 wherein the direction of winding of first compression spring 20 is opposite to the direction of winding of second compression spring 18, see col. 3, lines 50-57.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the direction of winding of first compression spring opposite to the direction of winding of second compression spring, as taught by Johnsen, in order to prevent possible mechanical interference between the first and second springs resulting from interleaving of the coils.

7. Claims 3, 73, and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston and in view of Fitzlaff as applied to claims 1 and 49 above, and further in view of Geyer (US 4,148,469).

Salice as modified failed to disclose wherein the free length of first compression spring is different from the free length of second compression spring.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, in order to vary the linear spring force of the springs.

8. Claims 4, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston, in view of Fitzlaff and in view of Johnsen as applied to claims 1 and 2 above, and further in view of Geyer '469.

Salice as modified disclosed wherein the outside diameter of the first compression spring is less than the outside diameter of the second compression spring and the wire diameter of the first spring is less than the wire diameter of the second spring but failed to disclose wherein the free length of first compression spring is different from the free length of second compression spring.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, in order to vary the linear spring force of the springs.

9. Claims 14, 17, 18, 22, 23, 51-56, 58, 59, 61, 62, 87, 90, and 93-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston and in view of Fitzlaff as applied to claims 1 and 49 above, and further in view of Miura et al. (US 6,315,093).

Salice as modified disclosed wherein the housing prevents fluid flow through the bottom end and the top end to an exterior of the housing but failed to disclose wherein the first passageway in said guide member includes a one way valve arrangement and a second passageway spaced from outer edge of guide member and spaced from first passageway, wherein the second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway.

Miura et al. teaches, as shown in fig. 5, a first passageway 14 includes one way valve arrangement and a second passageway 3c in guide member 3, wherein the second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway.

It would have been obvious to one of ordinary skill in the art to merely provide the known first passageway with one way valve arrangement and a second passageway of the guide member of Salice as modified, as taught by Miura et al., in order to change the damping characteristics of the spring system.

10. Claims 15, 16, 19-21, 24-26, 28, 30, 32, 88, 89, 91, and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston, in view

of Fitzlaff and in view of Johnsen as applied to claims 1 and 2 above, and further in view of Miura et al. (US 6,315,093).

Salice as modified disclosed wherein the housing prevents fluid flow through the bottom end and the top end to an exterior of the housing but failed to disclose wherein the first passageway in said guide member includes a one way valve arrangement and a second passageway spaced from outer edge of guide member and spaced from first passageway, wherein the second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway.

Miura et al. teaches, as shown in fig. 5, a first passageway 14 includes one way valve arrangement and a second passageway 3c in guide member 3, wherein the second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway.

It would have been obvious to one of ordinary skill in the art to merely provide the known first passageway with one way valve arrangement and a second passageway of the guide member of Salice as modified, as taught by Miura et al., in order to change the damping characteristics of the spring system.

11. Claims 85 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salice in view of Johnston, in view of Fitzlaff and in view of Miura et al. as applied to claim 49 above, and further in view of Geyer '469.

Salice as modified failed to disclose wherein at least one of the first and second compression springs in a partially compressed state when the spring rod member is in fully extended position.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, so as the compression spring with the longer free length will be partially compressed when the spring rod member is in fully extended position in order to vary the linear spring force of the springs.

(10) Response to Argument

(I). In regards to Appellant's arguments:

A. 2. Patentably Distinct Independent Claims 1 and 49.

a). On page 14, lines 1-9, Appellant argued that the figures of Salice (US 6,615,450) reveals that the guide member (piston 7, fig. 1-2) is positioned at a substantial distance from the top bushing when the rod member 9 is moved to the fully extended position. Applicant's Claim 1 recites "said guide member designed to move into engagement with or move to a position closely adjacent to said top bushing when said rod member moves to a fully extended position" in lines 16-18. Salice disclosed, as

shown in fig. 2, top bushing 11. The phrase "closely adjacent" is a relatively broad phrase, Examiner maintains Salice still reads on the claim language. The prior art appears to be "closely adjacent" in the same manner as the instant invention.

b). On page 14, lines 10-16, Appellant argued that Salice is absent teachings regarding a guide member that has a passageway which is fully spaced from an outer edge of the guide member. Note that Salice disclosed in fig. 3-4, passageway 19, 20 is fully spaced from an outer edge of the guide member 7 (piston).

c). Start on page 14, lines 17 through page 16, Appellant argued that Johnston (US 5,360,123) discloses a very different type of spring system from the spring system disclosed in Salice. Johnston discloses a stabilizer that attempts to maintain the guide member on the rod member at generally the mid-region of the housing.

Salice disclosed in fig. 1-2, the use of one spring 6 between the piston and the bottom 5 of the cylinder in a spring system.

Note that what Salice lacks was the teaching of the use of two springs.

Johnston, as disclosed in fig. 18, is merely used for the teaching of the known use of two springs 134, 136 between the piston and the bottom of the cylinder in a spring system.

One of ordinary skill in the art would have provided the spring system of Salice with the known second spring, as taught by Johnston, in order to increase the linear force.

d). On page 16, last paragraph through page 18, Appellant argued that Fitzlaff (US 5,728,174) does disclose a sealing arrangement 11. Structure 4 also appears to be a potential sealing structure, but Fitzlaff is absent any disclosure of structure 4. As illustrated in Figure 1, neither structure 4 or 11 is located at least closely adjacent to a bottom of the top bushing. Since structure 11 is disclosed by Fitzlaff as a seal in order to seal the first chamber 9 from ambient as disclosed in col. 2, lines 51-52, the structure 4 has also be a seal to provide a tight seal between the cylinder 1 and top bushing 2. The phrase "at least closely adjacent" is relatively broad. Fitzlaff seal 4 still reads on the claim language.

A. 3. Patentably Distinct Dependent Claims

On page 20, second paragraph regarding "Dependent claims 5, 10, 11, 13, 27, 29, 31, 50, 57, 60 and 74-76 were also rejected under 35 USC 103(a) as being unpatentable over Salice in view of Johnston and Fitzlaff". Examiner maintains the rejection is proper, see par. 5 of the Grounds of Rejection as shown below.

Salice failed to disclose a second compression spring extending between said guide member and the bottom end of said housing and a sealing arrangement positioned at least closely adjacent to a bottom of said top bushing.

Johnston teaches, as shown in fig. 18, the use of first 134 and second 136 compression springs extending between the guide member and the bottom end of the housing.

It would have been obvious to one of ordinary skill in the art to provide a second compression spring into the spring system of Salice, as taught by Johnston, in order to increase the linear spring force.

Fitzlaff teaches, as shown in fig. 1, a sealing arrangement 4 positioned at least closely adjacent to a bottom of a top bushing 2.

It would have been obvious to one of ordinary skill in the art to provide a seal positioned at least closely adjacent to the bottom of the top bushing of Salice, as taught by Fitzlaff, in order to provide a tight seal between the top bushing and the cylinder so as to avoid leakage in the inner chamber.

B. The Second Issue on Appeal

On page 20, last paragraph regarding "dependent claims 2, 6, 8, 12 and 72 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston and Fitzlaff, and further in view of Johnsen". Examiner maintains the rejection is proper, see par. 6 of the Grounds of Rejection as shown below.

Salice as modified disclosed wherein the outside diameter of the first compression spring is less than the outside diameter of the second compression spring and the wire diameter of the first spring is less than the wire diameter of the second spring but failed to disclose wherein the direction of winding of said first compression spring is opposite to the direction of winding of said second compression spring.

Johnsen teaches, as shown in fig. 1, a resilient support device 10 wherein the direction of winding of first compression spring 20 is opposite to the direction of winding of second compression spring 18, see col. 3, lines 50-57.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the direction of winding of first compression spring opposite to the direction of winding of second compression spring, as taught by Johnsen, in order to prevent possible mechanical interference between the first and second springs resulting from interleaving of the coils.

C. The Third Issue on Appeal

On page 21, second paragraph regarding “dependent claims 3, 73 and 84 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston and Fitzlaff, and further in view of Geyer”, Examiner maintains the rejection is proper, see par. 7 of the Grounds of Rejection as shown below.

Salice as modified failed to disclose wherein the free length of first compression spring is different from the free length of second compression spring.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, in order to vary the linear spring force of the springs.

D. The Fourth Issue on Appeal

On page 22, mid-section regarding "dependent claims 4, 7 and 9 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston, Fitzlaff and Johnsen, and further in view of Geyer". Examiner maintains the rejection is proper, see par. 8 of the Grounds of Rejection as shown below.

Salice as modified disclosed wherein the outside diameter of the first compression spring is less than the outside diameter of the second compression spring and the wire diameter of the first spring is less than the wire diameter of the second spring but failed to disclose wherein the free length of first compression spring is different from the free length of second compression spring.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, in order to vary the linear spring force of the springs.

E. The Fifth Issue on Appeal

On page 23, regarding "dependent claims 14, 17, 18, 22, 23, 51-56, 58, 59, 61, 62, 87, 90 and 93-96 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston and Fitzlaff, and further in view of Miura", Examiner maintains the rejection is proper.

On page 24, second paragraph, Appellant argued "Miura discloses a gas spring system. There are no mechanical springs included in the housing of the spring system of Miura". Examiner disagrees since Miura discloses, as shown in Figure 1, spring 8.

On page 25, Appellant argued "The disclosure of Miura does not indicate the location of the two passageways on the guide member" in line 1; "Dependent claims 22 and 55 include the limitation that the second passageway in the guide member has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway. Miura has no teachings regarding such concept". Examiner disagrees since Miura disclosed, as shown in Fig. 5 a third embodiment similar to Fig. 1, a first passageway (check valve 14) and a second passageway (orifice 3c which is similar to orifice 3c of Fig. 1) on piston 3.

Miura was silent to disclose that the second passageway in the guide member has a maximum fluid flow rate that is less than a maximum fluid flow rate of the first passageway. First of all, Applicants' specification did not disclose "any criticality" regarding to the flow rate of second passageway in regards to the first passageway.

It is well known in the art that a check valve, with a greater flow rate than the orifice, is added to the piston of a damper, aside from the orifice, in order to accommodate high shock load.

F. The Sixth Issue on Appeal

On page 26, last paragraph, regarding "dependent claims 15, 16, 19-21, 24-26, 28, 30, 32, 88, 89, 91 and 92 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston, Fitzlaff and Johnsen, and further in view of Miura". Examiner maintains the rejection is proper. Note that the Examiner has the same response as shown in "E. The Fifth Issue on Appeal".

G. The Seventh Issue on Appeal

On page 29, regarding "dependent claims 85 and 86 under 35 USC 103(a) as being unpatentable over Salice in view of Johnston, Fitzlaff and Miura, and further in view of Geyer". Examiner maintains the rejection is proper, see par. 11 of the Grounds of Rejection as shown below.

Salice as modified failed to disclose wherein at least one of the first and second compression springs in a partially compressed state when the spring rod member is in fully extended position.

Geyer teaches, as shown in fig. 2, first 32 and second 30 compression springs wherein one spring having a free length that is greater than the other.

It would have been obvious to one of ordinary skill in the art to provide the spring system of Salice as modified with the free length of first compression spring is different from the free length of second compression spring, as taught by Geyer, so as the compression spring with the longer free length will be partially compressed when the spring rod member is in fully extended position in order to vary the linear spring force of the springs.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mariano Sy/

/Robert A. Siconolfi/

Supervisory Patent Examiner, Art Unit 3657

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